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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,090	03/01/2001	Yoav Eichen	18363.0002/P002	1528
24998	7590	03/03/2004	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			SIEW, JEFFREY	
2101 L STREET NW			ART UNIT	
WASHINGTON, DC 20037-1526			PAPER NUMBER	

1637

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

SA

## Office Action Summary

### Application No.

09/674,090

### Applicant(s)

YOAV EICHEN

### Examiner

Jeffrey Siew

### Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15, 16 and 18-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13, 15, 16, 18-21, 25-28, 35-38 and 41 is/are allowed.
- 6) ☒ Claim(s) 1, 22-24, 29-31, 34 and 42-44 is/are rejected.
- 7) ☒ Claim(s) 2-9, 32, 33, 39, 40, 45, 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,22,23,24,29,30, 31,34,42,43,44, are rejected under 35 U.S.C. 102(e) as being anticipated by Henkens et al (US6,391,558 May 21, 2002).

Henkens teach a system for assaying one or more targets in a sample comprising an assay device having one more assay sets comprising at least two electrodes and a recognition moiety immobilized on to least one of the two electrodes and capable of binding to one of targets, electric module for determining electric conductance and reagents for forming a conductive substance over a complex formed between said recognition moiety and said target which forms a conductive bridge between at least two of electrodes.(see whole document esp. abstract and col. 14 lines 33-41 teaching two electrode biosensor with electroactive label to make a bridge made by hybridization of capture probe with complementary target nucleic between working and reference electrode & figure 4). They teach plurality of bother working and reference electrodes

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(see col.4 line 42). They teach that the attached nucleic acids may be different for detecting different targets (see col. 4 line 67). They teach kits (see col. 9 lines 7-25)

The response filed 12/17/03 has been fully considered and deemed persuasive in part. The response has amended claims to recite "deposit". However Henckens et al teach that a probe is connected to electrode (see figure 1). They then teach 2 electrodes- working and reference electrode. They teach a reagent i.e. the electroactive label that "deposits" along with the detector probe which binds to attached probe and allows for conductive bridge to allow an electrochemical signal to be generated and measured across electrodes. The rejections are maintained over 1,22,23,24,29,30, 31,34,42,43,44 but withdrawn over claims 10,12,13,15,16,18-21 as these claims recite reagent comprising monomers and growing conductive polymer.

### SUMMARY

2. Claims 2-9,11,32,33,38,45,46 are objected for depending on rejected claim but are free of the prior art. Concerning claims 2-9 there is no prior art that teach or suggested the system wherein the reagents comprise a solution comprising nucleation center forming entities and a combination of metal ions and reducing agent to allow formation of conductive substance. Concerning claim 11, there is no prior art that teach or suggest the system with reagents are monomers of polyaniline. Concerning claim 45 there is no prior art that teach or suggest the method further comprising contacting with a first reagent solution to form nucleation center forming entities for depositing onto or binding complexes formed between target and recognition moiety. Concerning claim 46 there is no prior art that teach or suggest the kit further comprising

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reagents comprising nucleation center forming entities that deposit or bind to a complex between said recognition moiety and target and for growing a conductive bridge. Concerning claims 32 & 33 there is no prior art that teach or suggest the kit further comprising reagent for nucleation center entities and combination of metal ions and reducing agent to allow growth of conductive substance on said entities

Claims 10-13,15,16,18-21 & 38 are allowable. Claims 25-28 is allowable. Concerning claim 25 there is no prior art that teach the method comprising two electrodes with bound recognition moiety and contacting to form conducting metal substance over said nucleation center forming entities. Concerning claims 10-13,15,16,18-21, 38 & 26-28 there is no prior art that teach or suggest the system or method using two electrodes with bound recognition moiety and contacting with monomers that bind to complex formed between targets and recognition moieties and treating so that monomers polymerize to form conducting polymer to form a conductive bridge.

Claims 35-37,41 are allowable. Claim 38,39,40 are objected for depending on rejected claim. There is no prior art that teach or suggest the device with integrated circuit with N1 x N2 junctions, recognition moiety bound to at least one electrode.

### *Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Siew whose telephone number is (703) 305-3886 and whose e-mail address is Jeffrey.Siew@uspto.gov. However, the office cannot guarantee security

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through the e-mail system nor should official papers be transmitted through this route. The examiner is on flex-time schedule and can best be reached on weekdays from 6:30 a.m. to 3 p.m. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703)-308-1119.

Any inquiry of a general nature, matching or filed papers or relating to the status of this application or proceeding should be directed to the Tracey Johnson for Art Unit 1637 whose telephone number is (703)-305-2982.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Center numbers for Group 1600 are Voice (703) 308-3290 and Before Final FAX (703) 872-9306 or After Final FAX (703) 30872-9307.

  
JEFFREY SIEW  
PRIMARY EXAMINER

June 16, 2003